

# 01. LDO & Linear Regulators

**Automotive 40V/60V low-power LDOs, industrial low-dropout regulators and general-purpose linear power ICs.**

This category targets low-noise rails, low standby power, sensor supplies, MCU rails and always-on automotive modules.

## Product Positioning

### Automotive Grade LDO

- For BCM, BMS, cockpit, infotainment and other low-power automotive rails.
- Covers 40V / 60V withstand voltage, ultra-low IQ and high-PSRR products.

### Industrial Linear Regulators

- Covers high-precision, low-dropout, low-power and general LDO families.
- Suitable for smart meters, instruments, appliance auxiliary rails and standby rails.

## Representative Models / Product Lines

Series	Input Voltage	Output	Current	IQ	Key Feature
ICW1232-Q1	1.5-5.5V	1.8-5.0V fixed	400mA	1.4uA	High PSRR, 70dB @1kHz
ICW1235-Q1	2.2-40V	1.8-15V fixed	200mA	1.5uA	40V automotive LDO
ICW1238-Q1	2.2-40V	3.3-12V fixed	500mA	1.6uA	40V / 500mA output
ICW1261-Q1	2.2-60V	3.3-15V fixed	150mA	2.3uA	60V automotive LDO
MD50xx / MD71xx	2.0-15V class	Fixed output	30-500mA	Low IQ options	Industrial low-power LDO
ICW1117 / ICW78xx	2.5-35V class	Fixed / ADJ	up to 1A	General purpose	Industrial linear regulator

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## Applications and Promotion Notes

### Typical Applications

- Automotive power rails: BCM, BMS, smart cockpit and automotive head units.
- Low-power regulation for smart meters, instruments and industrial controllers.
- Battery-powered systems requiring high voltage tolerance and long standby time.

### Promotion Focus

- 40V / 60V LDOs address automotive input transients and battery-powered rails.
- Low IQ helps reduce standby power in always-on modules.
- Automotive versions can be promoted to auto electronics, BMS and cockpit customers.

## Selection Guide

Requirement	Recommended Direction	Notes
40V input, within 200mA	ICW1235-Q1	For body control, BMS and cockpit auxiliary rails.
60V input, low standby power	ICW1261-Q1	For higher input margin or harsh automotive rails.
High PSRR, low noise	ICW1232-Q1 / ICW1238-Q1	For analog front end, sensors, audio or precision sampling rails.
Industrial 1A current class	ICW1117 / ICW78xx	For cost-sensitive general regulation.

Note: Before design-in, verify temperature grade, package, certification status, PPAP support and availability with the latest datasheet.